Title (en)

Process and furnace for eliminating radioactive wastes.

Title (de)

Verfahren und Ofen zur Beseitigung radioaktiver Abfälle.

Title (fr)

Procédé et four pour éliminer les déchets radioactifs.

Publication

EP 0143364 A1 19850605 (DE)

Application

EP 84113300 A 19841105

Priority

DE 3341748 A 19831118

Abstract (en)

[origin: ES8604001A1] Radioactive waste is disposed of by incineration with addition of an oxidising agent in an electric furnace with two temperature zones; the first at 200-400 det. C in which the gas is removed; and the second at 800 deg. C or higher, where the degassed solid waste is further heated. - Gaseous prods. from the first stage pass also through the second stage. Waste gases are pref. washed, esp. by water introduced into the first stage and passing through into the second stage at higher temperature. After this the waste gases, after discharge from the furnace, are burnt. After this combustion, the gases may be at least partly recycled into the furnace, and used for preheating the gases before combustion. The preheated gases are pref. passed through an aerosol filter. (0/2) EPAB- EP-143364 B A process for eliminating toxic, particularly but not exclusively radioactive wastes, through incineration with the addition of an oxidising agent, in which gaseous end products are subjected to further treatment in a flue gas installation and solid residues are filled into containers, characterised in that the wastes are firstly de-gassed in an electrically-heated furnace in a first temperature zone of 200-400 deg. C; that the de-gassed wastes are led through a second temperature zone at more than 800 deg. C; that the gases from the first temperature zone are led through the second temperature zone; and that the flue gases are burned with excess oxygen outside the furnace. (9pp)w USAB- US4655968 A Toxic and partic, radioactive wasts contg. oxidisable components are treated, to form solid residues of reduced vol. and gaseous prods. free of toxic constituents, by degasifying the waste at 200-400 deg.C in an electric furnace, passing to a second furnace zone at above 800 deg.C, and passing gases from the first zone into the second in intimate contact with the wastes. - In the second zone the waste is pyrolysed and reacted with the gases to gasify a substantial part and leave a reduced vol. of solids containing the toxic constituents which are discharged from the furnace. The gases are burned outside the furnace with oxygen, pref. after scrubbing with water, the scrubbing water being passed into the first and then the second zone of the furnace.

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Abstract (de)

Zur Beseitigung radioaktiver Abfälle kann man einen Ofen (1) verwenden, der Elektroden (20, 31) zur elektrischen Erhitzung aufweist. Der Ofen (1) kann am unteren Ende einen Auslaß (38) für Schlackenstoffe haben sowie eine Gasabfuhrleitung (43). Sein Schacht (30) umfaßt einen selbsttragenden Rohrkörper (26), der in einem Metallgehäuse (13) lösbar angeordnet ist. Am oberen Ende des Schachtes kann eine Leitung (50) für die Zufuhr von Wasser angeschlossen sein. Damit wird kohlenstoffhaltiger Abfall, gegebenenfalls auch Kohlenstoff eines Kohlenbettes, zu Wassergas (CO + H2) umgesetzt, das nach einer Reinigung in einer Abgasanlage verbrannt wird. Der Auslaß des Metallgehäuses umfaßt einen beweglichen Rost (38).

IPC 1-7

G21F 9/32

IPC 8 full level

G21F 9/02 (2006.01); **F23G 5/027** (2006.01); **F23G 5/44** (2006.01); **F23G 7/00** (2006.01); **G21F 9/00** (2006.01); **G21F 9/32** (2006.01)

CPC (source: EP US)

G21F 9/32 (2013.01 - EP US); Y10S 159/12 (2013.01 - EP US); Y10S 422/903 (2013.01 - EP US)

Citation (search report)

- [A] FR 2343317 A1 19770930 - WESTINGHOUSE ELECTRIC CORP [US]
- [A] FR 2038554 A5 19710108 - MERLIN GERIN
- [A] FR 2087798 A5 19711231 - GLASROOK PRODUCTS INC
- [A] US 3735010 A 19730522 - TURPIN J

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FR2620560A1; FR3002075A1; US9719679B2; WO2014125030A1

Designated contracting state (EPC)

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DOCDB simple family (publication)

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DOCDB simple family (application)

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